

In the Claims:

Please amend claims 1-5, 13-23, 27, 28, 32 and 35-63 as indicated below.

1. (Currently amended) A network management system, comprising:

a gateway which is coupled to a plurality of managed objects and which is configured to deliver one or more events generated by the managed objects to one or more managers or to deliver one or more requests generated by the one or more managers to one or more of the managed objects; and

a platform-independent interface to the gateway, wherein the gateway is configurable to communicate with the one or more managers through the platform-independent interface to deliver the one or more events or the one or more requests;

wherein the gateway is configurable to provide object-level access control between the one or more managers and the managed objects to receive the one or more events from or to send the one or more requests to the managed objects, wherein said object-level access control is provided at ~~the~~ an individual object level so that one of the one or more managers is granted access to one of the managed objects while being prevented from interfacing with a different one of the managed objects.

2. (Currently amended) The network management system of claim 1, wherein the gateway is configurable to determine whether each of the one or more managers is authorized to communicate with each of the managed objects.

3. (Currently amended) The network management system of claim 1, wherein the gateway is configurable to authenticate the one or more managers to receive the one

or more events from or to send the one or more requests to the managed objects as a function of the identity of the managed object.

4. (Currently amended) The network management system of claim 1, wherein the gateway is configurable to authenticate the one or more managers to receive the one or more events or send the one or more requests as a function of user IDs entered by users of the one or more managers.

5. (Currently amended) The network management system of claim 1, wherein the one or more events or one or more requests are delivered by the gateway through the platform-independent interface according to Internet Inter-Object Protocol (IIOP).

6. (Original) The network management system of claim 1, wherein the platform-independent interface to the gateway is expressed in an interface definition language, and wherein the interface definition language comprises a language for defining interfaces to the managed objects across a plurality of platforms and across a plurality of programming languages.

7. (Original) The network management system of claim 6, wherein the interface definition language comprises OMG IDL.

8. (Original) The network management system of claim 1, wherein the managed objects comprise one or more objects corresponding to a telephone network.

9. (Original) The network management system of claim 1, wherein the managed objects comprise an object corresponding to a telecommunications device.

10. (Original) The network management system of claim 1, wherein the gateway is configurable to provide security audit trails.

11. (Original) The network management system of claim 10, wherein the

gateway providing security audit trails comprises the gateway providing access to a logging service.

12. (Previously presented) The network management system of claim 11, wherein the logging service is operable to log an ID of a user that receives each event or sends each request.

13. (Currently amended) The network management system of claim 11, wherein the logging service is operable to log an ID of ~~the~~ a respective one of the plurality of managed objects that is ~~the~~ a source of each event or ~~the~~ a target of each request.

14. (Previously presented) The network management system of claim 11, wherein the logging service is operable to log a time at which each event or request is generated.

15. (Previously presented) The network management system of claim 11, wherein the logging service is operable to log a time at which each event or request is delivered.

16. (Currently amended) The network management system of claim 1, wherein the one or more requests comprise a query for information concerning one of the managed objects.

17. (Currently amended) The network management system of claim 1, wherein the one or more requests comprise a command to set one or more parameters of one of the managed objects.

18. (Currently amended) The network management system of claim ~~[[1]]~~ 6, wherein the one or more requests are converted from the interface definition language to a Portable Management Interface (PMI) format prior to delivery to the managed objects.

19. (Currently amended) The network management system of claim [[1]] 6, wherein the one or more requests are converted from the interface definition language to a platform-specific format prior to delivery to the managed objects.

20. (Currently amended) A network management method, comprising:

sending an identity of a user of a manager application to a gateway, wherein the gateway is configurable to communicate with the manager application through a platform-independent interface;

determining on a managed object level whether or not the manager application is allowed to receive an event generated by one of a plurality of managed objects or to send a request to the one of the plurality of managed objects as a function of the identity of the user of the manager application, whereby access for the manager application to receive the event or send the request is approved or denied for said one of the plurality of managed objects at ~~the~~ an individual object level so that the manager application is granted access to one of the plurality of managed objects while being prevented from interfacing with a different one of the plurality of managed objects; and

delivering the event to the manager application or the request to the managed object if the manager access is approved.

21. (Currently amended) The network management method of claim 20, wherein the gateway is configurable to determine whether the manager application is authorized to communicate with the one of the plurality of managed objects.

22. (Currently amended) The network management method of claim 20, wherein the gateway is configurable to authenticate the manager application to receive the event or send the request as a function as the identity of the managed object generating the

event or receiving the request.

23. (Currently amended) The network management method of claim 20, wherein the gateway is configurable to authenticate the manager application to receive the event or send the request as a function of a user ID entered by the user of the manager application.

24. (Original) The network management method of claim 20, wherein the event or request is delivered by the gateway through the platform-independent interface according to Internet Inter-Object Protocol (IIOP).

25. (Original) The network management method of claim 20, wherein the platform-independent interface to the gateway is expressed in an interface definition language, and wherein the interface definition language comprises a language for defining interfaces to the managed objects across a plurality of platforms and across a plurality of programming languages.

26. (Original) The network management method of claim 25, wherein the interface definition language comprises OMG IDL.

27. (Currently amended) The network management method of claim 20, wherein the one of the plurality of managed objects comprises an object corresponding to a telephone network.

28. (Currently amended) The network management method of claim 20, wherein the one of the plurality of managed objects comprises an object corresponding to a telecommunications device.

29. (Original) The network management method of claim 20, wherein the gateway is configurable to provide security audit trails.

30. (Original) The network management method of claim 29, wherein the gateway providing security audit trails comprises the gateway providing access to a logging service.

31. (Original) The network management method of claim 30, wherein the logging service is operable to log an ID of a user that receives the event or sends the request.

32. (Currently amended) The network management method of claim 30, wherein the logging service is operable to log an ID of the respective one of the plurality of managed objects that is the a source of the event or the a target of the request.

33. (Original) The network management method of claim 30, wherein the logging service is operable to log a time at which the event or request is generated.

34. (Original) The network management method of claim 30, wherein the logging service is operable to log a time at which the event or request is delivered.

35. (Currently amended) The network management method of claim 20, wherein the request comprises a query for information concerning the one of the plurality of managed objects.

36. (Currently amended) The network management method of claim 20, wherein the request comprises a command to set one or more parameters of the one of the plurality of managed objects.

37. (Currently amended) The network management method of claim ~~[[20]]~~ 25, wherein the request is converted from the interface definition language to a Portable Management Interface (PMI) format prior to delivery to the one of the plurality of managed objects.

38. (Currently amended) The network management method of claim [[20]] 25, wherein the request is converted from the interface definition language to a platform-specific format prior to delivery to the one of the plurality of managed objects.

39. (Currently amended) A ~~earlier-tangible, computer accessible storage~~ medium comprising program instructions for network management, wherein the program instructions are computer-executable to perform:

sending an identity of a user of a manager application to a gateway, wherein the gateway is configurable to communicate with the manager application through a platform-independent interface;

determining on a managed object level whether or not the manager application is allowed to receive an event generated by one of a plurality of managed objects or to send a request to the one of the plurality of managed objects as a function of the identity of the user of the manager application, whereby access for the manager application to receive the event or send the request is approved or denied for said one of the plurality of managed objects at ~~the~~ an individual object level so that the manager application is granted access to one of the plurality of managed objects while being prevented from interfacing with a different one of the plurality of managed objects; and

delivering the event to the manager application or the request to the managed object if the manager access is approved.

40. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the gateway is configurable to determine whether the manager application is authorized to communicate with the one of the plurality of managed objects.

41. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the gateway is configurable to authenticate the manager application to receive the event or send the request as a function as the identity of the managed object generating the event or receiving the request.

42. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the gateway is configurable to authenticate the manager application to receive the event or send the request as a function of a user ID entered by the user of the manager application.

43. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the event or request is delivered by the gateway through the platform-independent interface according to Internet Inter-Object Protocol (IIOP).

44. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the platform-independent interface to the gateway is expressed in an interface definition language, and wherein the interface definition language comprises a language for defining interfaces to the managed objects across a plurality of platforms and across a plurality of programming languages.

45. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 44, wherein the interface definition language comprises OMG IDL.

46. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the one of the plurality of managed objects comprises an object corresponding to a telephone network.

47. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the one of the plurality of managed objects comprises an object corresponding to a telecommunications device.

48. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the gateway is configurable to provide security audit trails.

49. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 48, wherein the gateway providing security audit trails comprises the gateway providing access to a logging service.

50. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 49, wherein the logging service is operable to log an ID of a user that receives the event or sends the request.

51. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 49, wherein the logging service is operable to log an ID of the respective one of the plurality of managed objects that is ~~the~~ a source of the event or ~~the~~ a target of the request.

52. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 49, wherein the logging service is operable to log a time at which the event or request is generated.

53. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 49, wherein the logging service is operable to log a time at which the event or request is delivered.

54. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the request comprises a query for information concerning the one of the plurality of managed objects.

55. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim 39, wherein the request comprises a command to set one or more parameters of the one of the plurality of managed objects.

56. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim [[39]] 44, wherein the request is converted from the interface definition language to a Portable Management Interface (PMI) format prior to delivery to the one of the plurality of managed objects.

57. (Currently amended) The ~~earlier-tangible, computer accessible storage~~ medium of claim [[39]] 44, wherein the request is converted from the interface definition language to a platform-specific format prior to delivery to the managed object.

58. (Currently amended) A network management system, comprising:

a gateway which is coupled to a plurality of managed objects and which is configured to deliver one or more events generated by the managed objects to one or more managers or to deliver one or more requests generated by the one or more managers to one or more of the managed objects; and

a platform-independent interface to the gateway, wherein the gateway is configurable to communicate with the one or more managers through the platform-independent interface to deliver the one or more events or the one or more requests;

wherein the gateway is configurable to provide object-level access control between the one or more managers and the managed objects to receive the one or more events from or to send the one or more requests to the managed objects, wherein said object-level access control is provided at the an individual object level so that one of the one or more managers is granted access to one of the managed objects while being prevented from interfacing with a different one of the managed objects, and wherein the

managers use a request Service Access Point (SAP) for requests and responses.

59. (Currently amended) A network management method, comprising:

sending an identity of a user of a manager application to a gateway, wherein the gateway is configurable to communicate with the manager application through a platform-independent interface;

determining on a managed object level whether or not the manager application is allowed to receive an event generated by one of a plurality of managed objects or to send a request to the one of the plurality of managed objects as a function of the identity of the user of the manager application, whereby access for the manager application to receive the event or send the request is approved or denied for said one of the plurality of managed objects at the an individual object level so that the manager application is granted access to one of the plurality of managed objects while being prevented from interfacing with a different one of the plurality of managed objects; and

delivering the event to the manager application or the request to the managed object if the manager access is approved;

wherein the manager application uses a request Service Access Point (SAP) for requests and responses.

60. (Currently amended) A ~~carrier-tangible, computer accessible storage~~ medium, comprising program instructions for network management, wherein the program instructions are computer-executable to perform:

sending an identity of a user of a manager application to a gateway, wherein the gateway is configurable to communicate with the manager application through a platform-independent interface;

determining on a managed object level whether or not the manager application is allowed to receive an event generated by one of a plurality of managed objects or to send a request to the one of the plurality of managed objects as a function of the identity of the user of the manager application, whereby access for the manager application to receive the event or send the request is approved or denied for said one of the plurality of managed objects at the an individual object level so that the manager application is granted access to one of the plurality of managed objects while being prevented from interfacing with a different one of the plurality of managed objects; and

delivering the event to the manager application or the request to the managed object if the manager access is approved;

wherein the manager application uses a request Service Access Point (SAP) for requests and responses.

61. (Currently amended) A network management system, comprising:

a gateway which is coupled ~~to~~ between a plurality of managed objects and a plurality of proxy agent managers; and which is configured to deliver one or more events generated by the managed objects to one or more managers ~~or~~ and to deliver one or more requests generated by the managers to one or more of the managed objects, wherein each of the events and each of the requests include a user identification, wherein the user identification identifies the respective manager to which the event or the request belongs;

a platform-independent interface to the gateway, wherein the gateway is configurable to communicate with the one or more managers through the platform-independent interface to deliver the one or more events or the one or more requests, wherein the managers share a singleton Request Service Access Point (Request SAP) object;

wherein the gateway is configurable to provide object-level access control between the one or more managers and the managed objects to receive the one or more events from or to send the one or more requests to the managed objects, wherein said object-level access control is provided by the Request SAP object at the an individual object level so that one of the one or more managers is granted access to one of the managed objects while being prevented from interfacing with a different one of the managed objects; and

~~wherein the gateway uses a singleton SAP object that shares all ProxyAgents through which a manager deals with a managed object and allows the insertion of the user name in the request message to enforce object-level access control.~~

62. (Currently amended) A network management method, comprising:

sending an identity of a user of a manager application to a gateway, wherein the gateway is configurable to communicate with the manager application through a platform-independent interface, wherein the gateway is coupled between a plurality of managed objects and the manager application;

determining on a managed object level whether or not the manager application is allowed to receive an event generated by one of a plurality of managed objects or to send a request to the one of the plurality of managed objects

as a function of the identity of the user of the manager application,
wherein the event and the request include a user identification, wherein the
user identification identifies the manager application to which the event or
the request belongs;

whereby access for the manager application to receive the event or send the
request is approved or denied for said one of the plurality of managed
objects by a singleton Request Service Access Point (Request SAP) at the
an individual object level so that the manager application is granted access
to one of the plurality of managed objects while being prevented from
interfacing with a different one of the plurality of managed objects; and

delivering the event to the manager application or the request to the managed
object if the manager access is approved; ~~and~~

~~wherein the gateway uses a singleton SAP object that shares all ProxyAgents
through which the manager deals with a managed object and allows the
insertion of the user name in the request message to enforce object-level
access control.~~

63. (Currently amended) A ~~earlier~~ tangible, computer accessible storage
medium, comprising program instructions for network management, wherein the program
instructions are computer-executable to perform:

sending an identity of a user of a manager application to a gateway, wherein the
gateway is configurable to communicate with the manager application
through a platform-independent interface, wherein the gateway is coupled
between a plurality of managed objects and the manager application;

determining on a managed object level whether or not the manager application is
allowed to receive an event generated by one of a plurality of managed

objects or to send a request to the one of the plurality of managed objects as a function of the identity of the user of the manager application, wherein the event and the request include a user identification, wherein the user identification identifies the manager application to which the event or the request belongs;

whereby access for the manager application to receive the event or send the request is approved or denied for said one of the plurality of managed objects by a singleton Request Service Access Point (Request SAP) at the an individual object level so that the manager application is granted access to one of the plurality of managed objects while being prevented from interfacing with a different one of the plurality of managed objects; and

delivering the event to the manager application or the request to the managed object if the manager access is approved; and

~~wherein the gateway uses a singleton SAP object that shares all ProxyAgents through which the manager deals with a managed object and allows the insertion of the user name in the request message to enforce object level access control.~~